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on behalf of the Alliance for Materials Manufacturing Excellence (AMMEX)

House Science and Technology Committee
Subcommittee on Energy and Environment

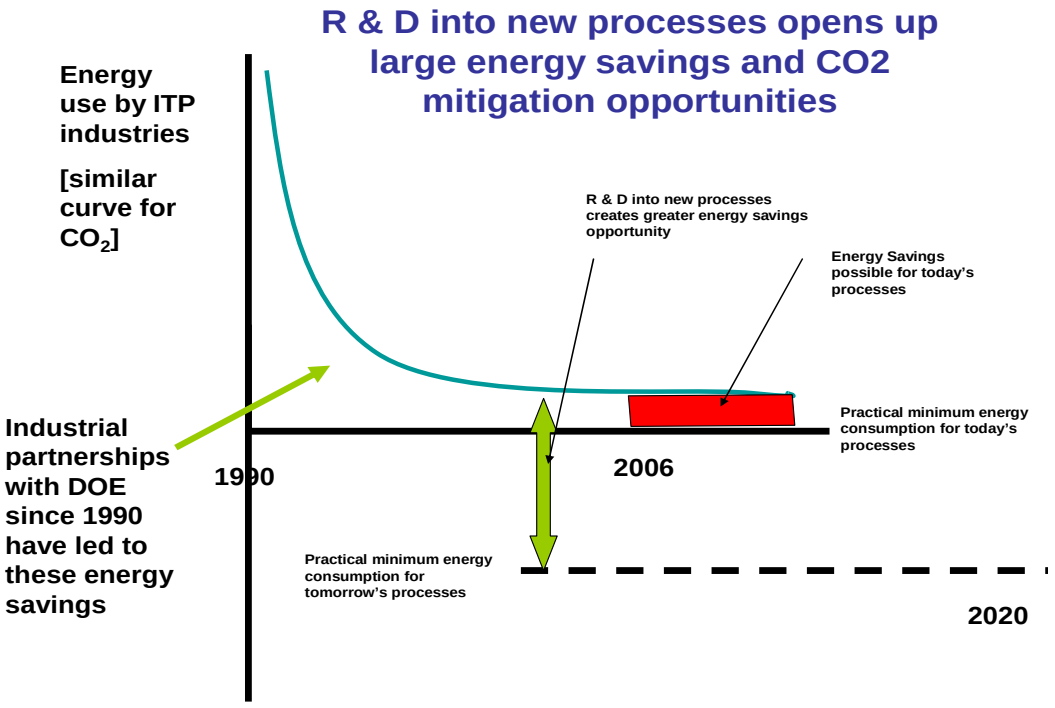
"Revisiting the Industrial Technologies Program (ITP): Achieving Industrial Efficiency"
September 25, 2007

Chairman Lampson, Ranking Member Inglis, and other members of the subcommittee, thank you for inviting me here to speak today.

My name is Lawrence Kavanagh and I am Vice President --Manufacturing and Technology at the American Iron and Steel Institute. I am here today on behalf of the Alliance for Materials Manufacturing Excellence or AMMEX. The organizations that are AMMEX members include the basic materials manufacturing sector [aluminum, chemicals, forest products, glass, metal casting, steel] in the US economy along with several stakeholders in materials manufacturing, such as the Northeast Midwest Coalition, the National Association of State Energy Officials and the American Council for an Energy-Efficient Economy.

The member organizations of AMMEX have been partners with the Department of Energy's Industrial Technology Program since its inception. ITP is a true public-private partnership. DOE and materials manufacturers jointly fund cutting-edge research that addresses the needs of the nation and materials manufacturers. All projects have the shared goals of reducing energy consumption, reducing environmental impact and increasing competitive advantage of US materials manufacturers.

By reducing the energy intensity of materials manufacturers and accelerating the delivery of new technology, ITP has helped make US materials manufacturers more competitive in global markets, preserving and creating good-paying jobs in the process. The program is unique because we select only projects with "dual benefits"—a public benefit such as reduced emissions or petroleum use, justifying the federal funding; and an industry benefit such as a more efficient process, justifying the industrial funding.



By reviewing the chart above, one can see that materials manufacturers have greatly reduced energy use since 1990 because of their co-investment with DOE. Materials manufacturers have become very efficient for the processes they operate today and in order to make the type of gains in the future that have been seen since 1990, ***new process development is required. Research and development efforts into new processes will open up large energy savings and carbon dioxide mitigation opportunities***.

AMMEX fully supports the Bill's focus on the development and deployment of new process technologies.

U.S. materials manufacturing continues to face challenges resulting from increased cost and decreased availability of traditional energy supply resources. These challenges have stimulated innovation in the materials manufacturing sector in order to create significant energy improvements and to diversify the energy supplies. While the innovations of the past have brought the materials manufacturing sector a long way, the sector cannot go further without new innovations. In order to do this, the materials manufacturing processes must be transformed, i.e. new processes and new innovations must be developed which will use much less energy and which will be able to utilize diverse forms of energy.

To accomplish these goals, the Federal government and industry will need to embark upon a co-funded effort to broaden and accelerate inherently high-risk research, development, and deployment of new materials manufacturing processes that utilize diverse energy sources. This effort will also allow the materials manufacturing sector to

lessen dependence on natural gas and oil resources and conventional electricity sources – thus benefiting consumers through contribution to a stable energy market.

Dramatic increases in industrial energy prices and growing global competition threaten the vitality and the future of U.S. materials manufacturing. Unless this trend is reversed, American manufacturing jobs in these key industries will increasingly move overseas. Manufacturers have responded to such challenges in the past by applying the power of innovation to create new products and processes that sustain the foundation of the U.S. economy.

Secondarily, proposed changes within the DOE Industrial Technologies Program are also supported by AMMEX members:

- The broadening of the stakeholder group to include data centers and food processors is important as it may offer opportunities for incremental energy savings in the near term
- The establishment of a cross-cutting portfolio that includes lightweight materials research, inclusive of those made by AMMEX members [e.g., advanced high strength steels, aluminum, metal castings, composites, glasses and others]
- The establishment of a cross-cutting portfolio that includes nano-manufacturing so long as it recognizes that materials made by AMMEX members are in fact nano-materials

AMMEX remains concerned with the recent funding levels of ITP. In the years 1990-96 the program consisted largely of "industry specific funding" and averaged 100 million dollars annually. Both the House and Senate appropriations bills would increase the total funding for ITP to $58 million. However, this amount remains far less than historical levels for the program, and far less than what is necessary to go after the sizeable benefits associated with new process development. As the committee further examines ITP, we request your assistance in:

- increasing funding for ITP to at least $125 million.
- Retaining a balanced portfolio of research from the point of view of research application, i.e., that the portfolio includes both industry specific R & D in at least aluminum, chemicals, forest products, glass, metal casting and steel; and cross-cutting research
- Retaining a balanced portfolio of research from the point of view of research impact, i.e., that 50% or more of the funding go to research into new process development [where the energy savings potential in industry is highest].

We would be happy to provide input to the Committee detailing the above points.

The U.S also faces serious shortages in the science and engineering manpower that is needed to keep America's competitive edge in world markets through technology innovation and timely application. From the President's State of the Union Address to the Protecting America's Competitive Edge Act in Congress, the nation is awakening to the need for a re-energizing of our commitment to technology education.

We have proposed to the committee an effort to both rebuild America's materials manufacturing industries and revitalize our science and engineering institutions. It builds a new public-private partnership to support these twin goals. It will ensure that the U.S. materials manufacturing industry will remain vital and competitive through:

- Accelerating technology innovation to ensure the future competitiveness, resource efficiency and sustainability of our domestic materials manufacturing industry;
- Building the vital intellectual infrastructure, in American universities and laboratories, that will work in partnership with the materials manufacturing industry; and
- Maintaining the healthy American materials manufacturing base, which is vital to our national security.

Our proposal would accomplish these goals by:

- Establishing an industry co-funded research program that develops the innovative, breakthrough technologies that will sustain our competitiveness, while realizing national goals in energy and resource efficiency ;
- Supporting materials manufacturing research programs at universities and research institutions across the country;
- Establishing a program that accelerates the adoption of technology innovation in the marketplace; and
- Assisting industrial facilities in identifying opportunities for greater energy efficiency, improved product quality and reduced environmental impacts.

On behalf of my partners in the AMMEX coalition, I thank you for the opportunity to appear before you today. We look forward to continuing to work with the committee as you move forward on potential legislation.